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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,743	11/12/2003	Henry David Hayes	B162 1120.1	7541

7590 03/30/2006  
WOMBLE CARLYLE SANDRIDGE & RICE  
P.O. Box 7037  
Atlanta, GA 30357-0037

EXAMINER
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LEE, GUNYOUNG T

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/706,743	<b>Applicant(s)</b> HAYES, HENRY DAVID	
	<b>Examiner</b> Gunyoung T. Lee	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03/09/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/12/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed March 9, 2006, with respect to the rejection(s) of claim(s) 1-15 under 35 U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14).

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference characters mentioned in the description: "light bulb 60", "LED bulb(s) 61", "power sensor 23", "low-power indicator light 25", "safety switch 24" and "batteries 21" described in pages 5-6 of specification are **not shown in Fig. 6**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5), because they include the following reference character(s) not mentioned in the description: Most of the **reference characters** shown in **Fig. 6** (e.g. "OSC1", "Q1", "C1" IC1 LED04A SUB VDD" and so on) are **not** clearly described in the **specification**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 1, 10 and 11 are objected to because of the following informalities: the phrases "a power source with **an** available **power**" and "a primary bulb that operates

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with a **first** power and at least one LED bulb that operates with a **second** power **lower** than the **first** power" in lines 2-4 of claim 1, in lines 2-3 of claim 10 and in lines 1-2 of claim 11 render the claims indefinite, because the power source provides only one power not two different powers. Appropriate correction is required.

5. Claims 1, 4-6 and 8-10 are objected to because of the following informalities: the abbreviation "LED" used in various locations of the claims renders the claims indefinite. It is advised by Examiner not to use an abbreviation without introducing it. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

***(Regarding claims 1, 4-6, 8-10 and 11, as best understood)***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The claims must be given their broadest reasonable interpretation. See MPEP § 2111.

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8. Claims 1-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (US 6,017,140) in view of the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14).
9. Chou discloses a multifunctional bicycle lamp (Fig. 1).
10. In regards to claims 1-7 and 9, Chou discloses:
  - A housing (Fig. 2, 10, 30, 32) containing a power source (15) (claim 1);
  - A primary bulb (Fig. 2, 22) and at least one light emitting diode (LED) bulb (18) (claim 1);
  - A sensor (Fig. 3, 16, microprocessor with power testing function) connected to the power source (15), the primary bulb (22), and the at least one LED bulb (18) (claim 1);
  - Wherein the safety light can be operated at half the first power to maintain the primary bulb (22) at half illumination (col. 2, lines 42-55) (claim 3);
  - Wherein the at least one LED (Fig. 2 and 3, 18) can be operated in a flashing mode (col. 2, lines 61-63) (claim 5);
  - An activation button (Fig. 12) that can be activated to select between an off condition, a primary bulb (22) operation condition, and a LED (18) operation condition of the safety light (Fig. 4) (claim 6);
  - Wherein the primary bulb operation condition includes a fully illuminated bulb position and a half illuminated bulb position (Fig. 4, and col. 3, lines 13-17 and 28-34) (claim 7).
11. In regards to claim 1-7 and 9, Chou does not expressly disclose:

- Wherein the sensor determines that the available power is inadequate to supply the first power, the sensor switches the safety light from operation of the primary bulb to operation of the at least one LED bulb (claim 1);
- Wherein the first power is a minimum power required to maintain the primary bulb at full illumination (claim 2);
- Wherein the second power is a minimum power required to maintain the at least one LED at full illumination (claim 4);
- Wherein the activation button can be operated to override the automatic sensor switching from operation of the primary bulb to operation of the at least one LED bulb (claim 9).

12. In regards to the sensor providing automatic switching process (claim 1) and overriding process by an activation button (claim 9), the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14) discloses that it is well known and available knowledge to one of ordinary skill in the art to use the Bell Sports circuit (part #L0001) having a microcontroller (microprocessor) to carry out the steps and processes including:

- Determining that the available power is inadequate to supply the first power and then switching the safety light from operation of the primary bulb to operation of the at least one LED bulb (Fig. 5, 83);

- Overriding the automatic switching from operation of the primary bulb to operation of the at least one LED bulb when an activation button is operated (Fig. 5, 97).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the Bell Sports circuit with a microprocessor for the multifunctional bicycle lamp of Chou to provide illumination continuously even when there is not sufficient power for full operation of the lamp system, for the purpose of providing notification to the rider that the power source needs to be replaced (or recharged) and providing an inferior illumination while the rider takes some action before the power source becomes totally empty.

13. In regards to set the first power as a minimum power to maintain the primary bulb at full illumination (claim 2) and set the second power as a minimum power to maintain the at least one LED at full illumination (claim 4), it is well known and available knowledge to one of ordinary skill in the art how to set/adjust a power level to a light bulb in a circuitry using electrical components such as resistors and transistors.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to set the first power as a minimum power to maintain the primary bulb at full illumination and set the second power as a minimum power to maintain the at least one LED at full illumination, for the purpose of providing maximum illumination without burning the light bulbs.



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14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (US 6,017,140) and the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14) as applied to claims 1 and 6 above, and further in view of Schmidt (US 4,290,095).

15. In regards to claim 8, Chou and the Applicant's Admitted Prior Art disclose the invention substantially as claimed except for a LED operation condition which includes a steady LED position and a flash LED position. Schmidt discloses an aiming post light system with a flashing/steady LED (Fig. 1, 44 and col. 4, lines 3-6) as the light source. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the flashing/steady LED unit of Schmidt for the multifunctional bicycle lamp of Chou modified by the Applicant's Admitted Prior Art to provide various lighting methods, for the purpose of providing enhanced visibility of the bicycle by others, such as automobile drivers or pedestrians, at night or cloudy day to increase the safety of the rider.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (US 6,017,140) and the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14).

17. In regards to method claim 10, all structural limitations claimed in claim 10 are met by Chou and the Applicant's Admitted Prior Art, as describe in the rejection of apparatus claim 1 above, except for a method of operating a safety light. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a method of operating the multifunctional bicycle (safety) lamp of Chou

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modified by the Applicant's Admitted Prior Art to provide continuous light for the purpose of enhancing the safety of the bicycle rider at night or cloudy day.

18. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (US 6,017,140) and the Applicant's Admitted Prior Art (Specification, page 11, lines 8-14).

19. In regards to method claims 11-15, all structural limitations claimed in claim 10 are met by Chou and the Applicant's Admitted Prior Art, as describe in the rejections of apparatus claims 1-7 and 9 above, except for a method of operating a safety headlight. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a method of operating the multifunctional bicycle lamp (headlight) of Chou modified by the Applicant's Admitted Prior Art to provide continuous light for the purpose of enhancing the safety of the bicycle rider at night or cloudy day.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gunyoung T. Lee whose telephone number is (571) 272-8588. The examiner can normally be reached between 7:30 - 4:00 PM.

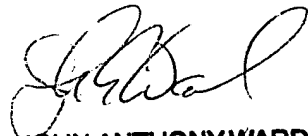
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached at (571) 272-2378. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GTL  
3/23/2006



**JOHN ANTHONY WARD**  
**PRIMARY EXAMINER**